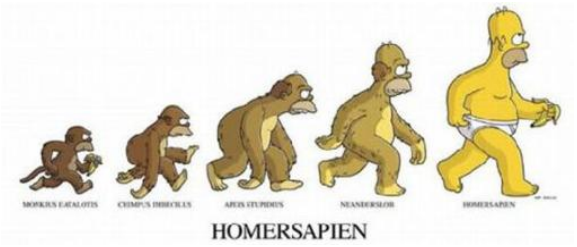
Name:_____Class:_____

Section 2 - Evidence of Evolution



Reading Preview – what three key concepts should you be thinking about as you read this section?

1.

2.

3.

4. What are the key terms that you will be looking for as you read?

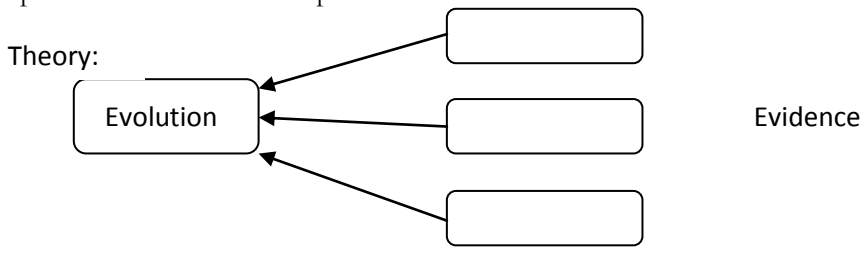
5. Review – what is natural selection (from last reading or glossary)?

6. What is the evidence given that natural selection is occurring today?

7. The reading discusses pesticide resistance in insects. Another piece of evidence supporting modern-day natural selection is the development of antibiotic resistance by certain bacteria. Explain how this happens and how this supports theories about natural selection. (Use the explanation about insects as a guide).

Interpreting the Evidence:

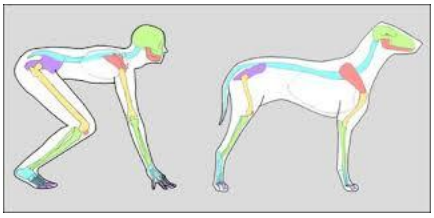
8. There are several pieces of evidence that support the 'change over time' in living things that we call evolution. Fill in the graphic below to show these pieces of evidence:



9. What are some similarities in the early development stages of fish, salamanders, chickens and opossums?

10. How do these similarities support the theory of evolution?

11. Body Structure: What is a vertebrate? Give five examples of vertebrates?



12. Why do scientists think that all vertebrates share common ancestry?

13. What is a homologous structure?

14. Lab Zone skills activity: Do crocodiles share a common ancestor with dolphins, birds, and dogs? Support your answer with evidence from the drawings and figures on page 150.

15. Inferring Species Relationships: How do scientists determine the evolutionary relationships among species?

16. The Madagascar fossa looks like some of the large cats from Africa. It has claws and whiskers, and is clearly a vertebrate. Yet scientists say that it is descended from the mongoose. What evidence did they use to determine this relationship?

17. Scientists use evidence to support their ideas, and when new evidence comes in, sometimes ideas must change in response. Explain how this information applies to the relationship between the lesser pandas and the giant pandas.

18. What is a branching tree, and how is it used by scientists?

19. How can isolation lead to the formation of a new species?